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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/092,661

03/06/2002

Dan A. Preston

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08/16/2006

STOEL RIVES LLP  
900 SW FIFTH AVENUE  
SUITE 2600  
PORTLAND, OR 97204-1268

EXAMINER

MEHRA, INDER P

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/092,661	<b>Applicant(s)</b> PRESTON ET AL.	
	<b>Examiner</b> Inder P. Mehra	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 20-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-22, 27 and 30 is/are rejected.
- 7) ☒ Claim(s) 23-26, 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>see office action</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to application/amendment dated: 2/21/06.

#### ***Information Disclosure Statement***

2. The information disclosure statement filed 9/4/02 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because DOCUMENTS UNDER “foreign patent documents”, other documents are the same as in IDS filed on 1/20/06. Therefore one IDS dated 1/20/06 including these document has been considered, whereas other on dated 9/4/02 is not considered. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 20 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by (US patent No. 5,761,204), hereinafter, Grob), hereinafter, Grob.

For claim 20, Grob discloses, “A cellular telephone (**terminal equipment 10 in fig. 1, col. 2 lines 62-64, and, mobile 60 in fig. 3, col. 3 line 67**), comprising;

- an audio microphone for converting voice signals into electrical voice signals, (**Grob discloses, “Vocoder receives analog information from microphone 260”;**
- an analog to digital converter for converting the electrical voice signals into digital voice samples (**Grob discloses, “vocoder encodes the information”, refer to col. 4 line 15; Vocoder includes A/D converter, refer to col. 1 lines 44-46, “vocoder”;**
- a voice coder for converting the digital voice samples into encoded digital voice signals, (**vocoder encodes the information, refer to col. 4 line 15 ;**
- a transceiver that transmits the encoded digital voice signals over a digital voice channel of a wireless communications network, (**Grob discloses mobile 60 (transceiver)---transmission over wireless link 160, refer to col. 4 lines 14-15; further, discloses, “digitizing modem tones with vocoder and sending them over the digital wireless link”, refer to col. 1 lines 54-56; and**
- an inband signaling modem that converts a digital bit stream into synthesized tones (**Grob discloses, “a FAX machine uses a modem to translate digital information to audible analog tones for transmission over telephone network, refer to col. 1 lines 23-25”;** and outputs the synthesized tones to the voice coder, the voice coder encoding the synthesized tone in the same manner as the electrical voice signals before being transmitted over the digital voice channel (**Grob discloses “modem 40 converts audible signal 130 to digital data 140”, refer to col. 3 lines 4-6).**

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 1-22, 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Grob, as above**, in view of **Pommerening** (US Patent No. 3,742,197),

For claim 21, Grob discloses “a digital to analog converter coupled between the inband signaling modem and the analog to digital converter (**Grob discloses “modem 40 in fig. 1. including A/D along with modem 20 including D/A, refer to col. 2 line 65 through col. 3 line 6).**

**It is obvious to have design choice adjusted according to design requirements.**

For claim 22, Grob discloses, “wherein the inbound signaling modem and the digital to analog converter are located in a device detachably coupled to the cellular telephone (**Grob discloses, “D/A converter located in modem 20 (inband signaling modem) coupled with A/D modem 40, refer to fig. 1).**

For claim 27, Grob discloses “a decoder (16) coupled to the voice coder for detecting and decoding synthesized tones received over the digital voice channel, **refer to col. 1 lines 45-47.**

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For claim 30, Grob discloses all the limitations of subject matter with the exception of the following limitations, which are disclosed by Pommerening, as follow:

\* wherein the synthesized tones are generated at a first audible frequency to represent binary "1" values ---and --- for a duration of about 10 miliseconds and generated as one continuous signal (**Pommering discloses "binary signal producing means includes means to produce different signals in binary form indicating value differences between successive samples", refer to col. 7 lines 10-15."**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of "wherein the synthesized tones are generated at a first audible frequency to represent binary "1" values ---and --- for a duration of about 10 miliseconds and generated as one continuous signal as taught Pommerening. The capability can be implemented in cellular phone modem. The motivation for using this capability is to produce different a large number of different output tone signals.

### ***Allowable Subject Matter***

### **REASONS FOR ALLOWANCE**

7. Claims 23-26 and 28-29 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Prior Art of Record***

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8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Leung et al** (US Patent No. 5,864,763) discloses digital wireless telephone system interface for analog telecommunications equipment.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 20-30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Inder P Mehra  
Examiner  
Art Unit 2617

  
**JOHN PEZZLO**  
**PRIMARY EXAMINER**